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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,379	11/19/2003	Satoru Shigeta	056204.52942US	5460
23911	7590	11/17/2005	EXAMINER	
CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300			GLASS, ERICK DAVID	
			ART UNIT	PAPER NUMBER
			2837	

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/715,379	SHIGETA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Erick Glass	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20 is/are allowed.
- 6) ☒ Claim(s) 1,8,15 and 16 is/are rejected.
- 7) ☒ Claim(s) 2-7,9-14 and 17-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/19/03, 5/10/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 states, "a power transistor to said power transistor." The claim is unclear in what it is describing.

Claim 8 states, "an interface circuit for transferring to the module containing a semiconductor device." It is unclear of what is being transferred.

### ***Claim Rejections - 35 USC § 102***

Claims 1, rejected under 35 U.S.C. 102(e) as being anticipated by Titus (US 6,628,170).

With respect to claim 1, Titus discloses an interface circuit (fig. 1, 28) for transferring a control signal from a small-signal circuit (fig. 3, 26) for driving a power transistor (fig. 3, 105) to said power transistor, said interface circuit comprising a noise absorber (fig. 3, 123) for electrically absorbing noise voltage produced between the ground (fig. 3, 131) of said small-signal circuit and that of said power transistor; said interface circuit characterized in that said noise absorber ensures that said control signal produced by said small-signal circuit is transferred to said power transistor, without being affected by said noise voltage if produced.

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With respect to claim 8, Titus discloses an interface circuit (fig. 3) for transferring to the module (fig. 3, 102) containing a semiconductor device (fig. 3, 105) the control signal (fig. 3, 26) for driving said semiconductor device outputted from a controller, said interface circuit comprising: receiving means (fig. 3, 105) for electrically receiving said control signal outputted from said controller; and transferring means (fig. 3, 104) for transferring to said module said control signal received by said receiving means, ignoring changes in the level of said control signal caused by the difference of voltage between the ground potential of said controller and that of said semiconductor device.

With respect to claim 15, Titus discloses an interface circuit (fig. 3) for transmitting the control signal (fig. 3, 26) outputted from the controller for driving a semiconductor device (fig. 3, 105), to said semiconductor device; said interface circuit comprising: means for electrically receiving (fig. 3, 105) the control signal outputted from said controller; and means for transferring (fig. 3, 104) the received control signal to said semiconductor device, ignoring changes in the level of said control signal caused by the difference of voltage between the ground potential of said controller and that of said semiconductor device.

With respect to claim 16, Titus discloses a power transistor (fig. 3, 105), a small-signal circuit (fig. 3, 26) for driving said power transistor, and an interface circuit (fig. 3) for allowing the control signal to be transferred to said power transistor from said small-signal circuit; said interface circuit comprising a noise absorber (fig. 3, 104) that electrically absorbs the noise voltage produced between the ground of said small-signal circuit and that of said power transistor,

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by the stray inductance of said power transistor and a power module (fig. 3, 102) consisting of this power transistor; said power converter further characterized in that aid noise absorber ensures that said control signal produced by said small-signal circuit is transferred to said power transistor, without being affected by said noise voltage if produced.

***Allowable Subject Matter***

Claims 2-7, 9-14, and 17-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 20 is allowable because it contains a wheel drive motor that is driven by ac power which was converter from a dc power source for an electrical vehicle where the power converter contains containing a power transistor, small signal circuit, and noise absorber.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Glass whose telephone number is 571-272-8395. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on 571-272-2107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EG



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